

LISTING OF THE CLAIMS

This listing of claims, amended as indicated below, will replace all prior versions, and listings, of claims in the application

1. (Currently Amended) A method of bonding wire between first and second bonding points with a bonding tool, comprising the steps of:

forming a first bond at the first bonding point with the bonding tool;

moving the bonding tool away from the first bond by a first distance;

moving the bonding tool towards the first bonding point and coupling the wire to the first bond;

thereafter, moving the bonding tool away from the first bond by a second distance;

forming a kink in the wire;

moving the bonding tool to extend a sufficient length of wire to form a wire loop between the first and second bonding points; and thereafter

moving the bonding tool to the second bonding point to form and forming a second bond.

2. (Currently Amended) A method according to claim 1, wherein the step of moving the bonding tool away from the first bond by the first distance includes the steps of moving the bonding tool substantially vertically upwards and thereafter moving the bonding tool towards the second bonding point while keeping the bonding tool substantially vertically over the first bond.

3. (Original) A method according to claim 1, wherein the step of moving the bonding tool away from the first bond by the first distance includes the steps of moving the bonding tool substantially vertically upwards and thereafter moving the bonding tool away from the second bonding point.

4. (Original) A method according to claim 3, wherein the step of moving the bonding tool away from the second bonding point comprises moving the bonding tool in a curved motion to a point outside a vertical plane passing through the first and second bonding points.

5. (Original) A method according to claim 4, including the step of subsequently moving the bonding tool towards the first bonding point in a curved motion to a point on the vertical plane passing through the first and second bonding points before coupling the wire to the first bond.

6. (Original) A method according to claim 1, wherein the step of moving the bonding tool away from the first bond by the second distance comprises the step of moving the bonding tool substantially vertically upwards.

7. (Original) A method according to claim 6, including the step of moving the bonding tool away from the second bonding point after moving the bonding tool vertically upwards.

8. (Original) A method according to claim 1, wherein the step of forming a kink in the wire comprises the steps of moving the bonding tool from a first position to a second position in a direction away from the second bonding point, and from the second position back to the first position.

9. (Original) A method according to claim 1, wherein a diameter of the wire is approximately 1.0 mil or less and a height of a highest point on the bonded wire relative to the first bonding point is less than or equal to 2.35 times the diameter of the wire.

10. (Currently Amended) A wire loop including a wire bond comprising:
a ball-bonded base portion;
a neck portion integrated with a top of the base portion constructed of an extension of the wire from the base portion which has the extended end thereof bonded to the base portion; and
[[a]] an extension of the wire extending running from the neck portion substantially transversely to an axis passing through the base portion and the neck portion that is substantially normal to a bonding surface of the wire bond at substantially the same height as the top of the base portion in a direction toward another wire bond.

11. (Original) A wire loop according to claim 10, wherein the neck portion of the wire loop has a substantially uniform cross-sectional area.

12. (Original) A wire loop according to claim 10, wherein a diameter of the wire is approximately 0.8 mils and a height of a highest point on the wire loop relative to a bottom of the base portion is less than or equal to 2.35 times the diameter of the wire.

13. (Original) A wire bond according to claim 10, wherein a diameter of the wire is approximately 1.0 mil and a height of a highest point on the wire loop relative to a bottom of the base portion is less than or equal to 2.08 times the diameter of the wire.

14. (Currently Amended) A wire loop including a wire bond comprising:
a ball-bonded base portion;
a curved portion integrated with and extending around at least a part of a side of the base portion which twists in a direction substantially transverse to an axis passing through the base portion and a bonding point that is substantially normal to a bonding surface of the wire bond; and
a wire extending from the curved portion in a direction towards another wire bond.

15. (Original) A wire bond according to claim 14, wherein the curved portion of the wire loop has a substantially uniform cross-sectional area.

16. (Original) A wire bond according to claim 14, wherein the curved portion extends along at least a part of a perimeter of the base portion.

17. (Original) A wire loop according to claim 14, wherein a diameter of the wire is approximately 0.8 mils and a height of a highest point on the wire loop relative to a bottom of the base portion is less than or equal to 2.1 times the diameter of the wire.

18. (Original) A wire bond according to claim 14, wherein a diameter of the wire is approximately 1.0 mil and a height of a highest point on the wire loop relative to a bottom of the base portion is less than or equal to 2.0 times the diameter of the wire.